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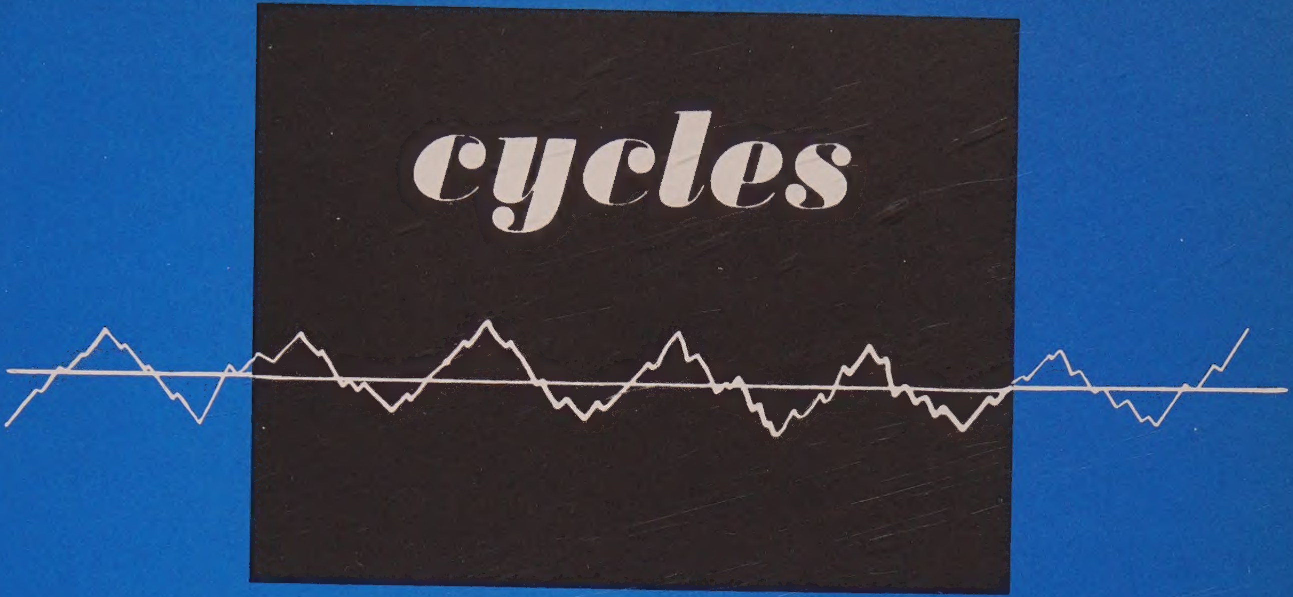

October 1960

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The recent note of warning stands

Cycles are only *one* of the forces you must consider if you are attempting economic forecasting.

If you ignore the cycles you run the risk of serious errors.

But unless you study and weigh all the *other* forces that, in addition to cycles, combine to create economic change, you will make grave mistakes.

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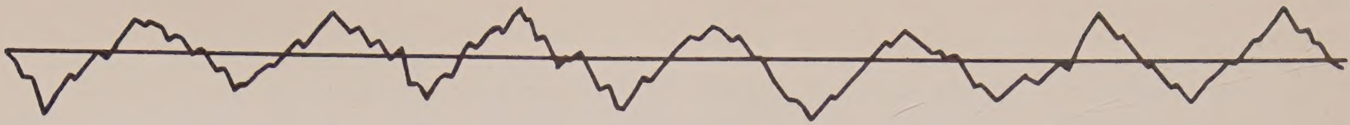

DIRECTOR'S LETTER. . . .

Dear Member:

Lately we have been hearing a great deal of talk about *growth*, especially, comparisons of Russian and United States growth. Most of it is tommyrot.

Growth, on a chart, is expressed by a smoothly flowing line, sloping upward from left to right. *The long time growth line is the axis around which the cycles fluctuate.*

In the process of studying cycles I have had to learn something about growth. This fact, and the fact that I have no axe to grind may make it possible for me to contribute something to the present discussion.

The first article in this month's issue discusses the growth of Russian production vis-à-vis the United States. It is limited to a discussion of growth in the United States, and in Russia, and a comparison of the two.

Anyone with eyes in his head can see on every hand the growing inelasticity, the aging —really the gradual dying—of the United States. Restrictions and hindrances to free activity beset us at every turn. We accept these restrictions partly because we are used to operating within their framework, partly because new restrictions are imposed upon us gradually, and partly because, in many instances, we see the reasonableness of the restriction. But reasonable or not, even necessary or not, they *are* restrictions and are evidence of our increasing crystalization, rigidity, old age, and eventual mummification.

Some Examples

Here are some of the restrictions under which I operate my property at Bradys Bend, near East Brady, Pennsylvania (but my father, in 1901, when he bought the property, suffered under *none* of them!):

I cannot stand on the river bank *on my own land* and fish, without a permit from the state. I cannot kill a deer *on my own land* without a permit from the state. I cannot sell you a mountain laurel bush from my own land without a permit from the state. I cannot own a dog without a permit from the state.

An amusing side light: recently our local paper reported a $250 fine for a man who had shot a doe out of season. The same paper reported the imposition of a $50 fine against another hunter who had shot a clergyman!

Before I can drill a gas well or an oil well, I must hire a registered surveyor to make a plot and file it with the state. The drilling must be done in accordance with detailed regulations. To abandon a well I must conform to certain other regulations. If I want to raise, or even lower, the price of gas I must get permission. If I start to serve a customer I can never stop. I cannot shut off a customer who does not pay a bill unless I observe certain formalities. I cannot run a gas pipe under a road without a permit. I must test our meters at certain intervals. Our meter prover must be examined at certain intervals ($35 to the state), and if anything is wrong, it must be re-examined (another $35). Once the inspector told us that he had orders to find something wrong—no matter what—with *every* prover, so the State (Heil Hitler!) could collect double fees. The only thing he could find wrong with ours was a crooked name plate! He stepped outside. We straightened the name plate. He returned and "retested" the prover. We paid $70. Thus the honest Commonwealth of Pennsylvania!

If I want to open a coal mine I have to

get a permit, not only from the Department of Mines, but from each of half a dozen other departments concerned with fish, wildlife, and I know not what all. These permits often require months to get. I must put up a $3,000 bond for faithful performance and then comply with hundreds of regulations. Even after all these are complied with, it takes months—sometimes years, to get the bond released.

I must tell the government all about my business, my income. I must keep my records in a certain way. I must carry certain sorts of insurance. If I fire an employee I must pay him a certain number of weeks for not working. I must act as tax collector for the government—township, state, and federal.

I cannot sell land without having it surveyed and getting a permit. I cannot even rent it for a trailer site or a camp site unless approved water and garbage facilities are provided.

At least ten regulations provide the kind of mail box I may have.

I cannot throw anything into the creek or the river.

I cannot drive a car without a vehicle permit and also a driver's permit. My car must have a horn, certain kinds of headlights, tail lights, stop lights, brakes. When I do drive, I am subject to all sorts of restrictions relative to speed, turns, signals, wearing spectacles, knowing the laws of the road; carrying registration cards, and vehicle inspections.

A recital of this sort is commonplace. If you run a railroad, or deal with organized labor, or operate a corporation, these restrictions are multiplied. *And yet not one of them affected my father in 1901.* Do you see why I say we are ossifying? And that nothing can (or will) be done about it?

One final example: in the New York City telephone book it takes 1,080 lines to list the New York City government telephones, 414 lines more to list the New York State telephones, and 858 lines more to list the U.S. government telephones—2,352 in all!!!

Good or bad, all 2,352 phones in New York City are busy carrying messages which hinder (i.e., regulate) in some way free individual activity.

The Law of Growth

It is not generally realized, but any organism—be it a pumpkin, a baby, a corporation, or a nation—has a built-in pattern of growth. These patterns differ in detail, but basically all of their growth patterns conform to the same law. This law is: as the organism gets older, it grows at a slower rate.

To change the growth trend of an organism requires a cataclysm—something like the Russian Revolution—or the sudden introduction of modern medical lifesaving into a country that lacks the desire and know-how to effect a corresponding reduction of births.

To talk about making any important change in the growth rate of the United States, short of making cataclysmic changes, is just plain nonsense.

Cordially yours,

Edward R. Dewey

Director

LORD WILLIAM BEVERIDGE ELECTED TO COMMITTEE

We are pleased to announce the election of Lord William Beveridge of Oxford, England to the Committee of the Foundation for the Study of Cycles.

Lord Beveridge, C.B. 1946, is an economist who has had a long and active life in education and public service. He holds many honorary degrees from British and foreign universities. His activities have been varied and include being head of the Ministry of Munitions, Ministry of Food, Chairman of the Broadcasting Committee, Vice Chancellor of London University, and others. He is a member of the Royal Statistical Society, President of the Royal Economic Society, co-founder of the Academic Assistance Council and the Society for the Protection of Science and Learning. Author of a long list of articles and books, he is most famous for the *Plan for Social Services* (1942). It is an honor to add his name to the Committee.

How Fast Is Russia Growing?

by Edward R. Dewey

The general public in the United States has finally awakened to the fact that Russia may be growing industrially at a faster rate than we, and that, unless something is done about it, Russia may soon outdistance us.

Many proposals are being advanced for avoiding this possibility. Most of them are mere hooey.

Before considering if it is possible to improve the relative position of the United States with respect to Russia, it is necessary to be precise in comparing the two.

What Are the Facts?

First of all, how do Russia and the United States compare industrially at the present time? Second, is Russia really growing faster than we? If so, how much faster? If so, and if we do nothing about it, when will they overtake us? What can we do about it?

Relative Size

At the present time we are at least 2 1/2 times as strong industrially as Russia. This fact is illustrated in Figure 1 below.

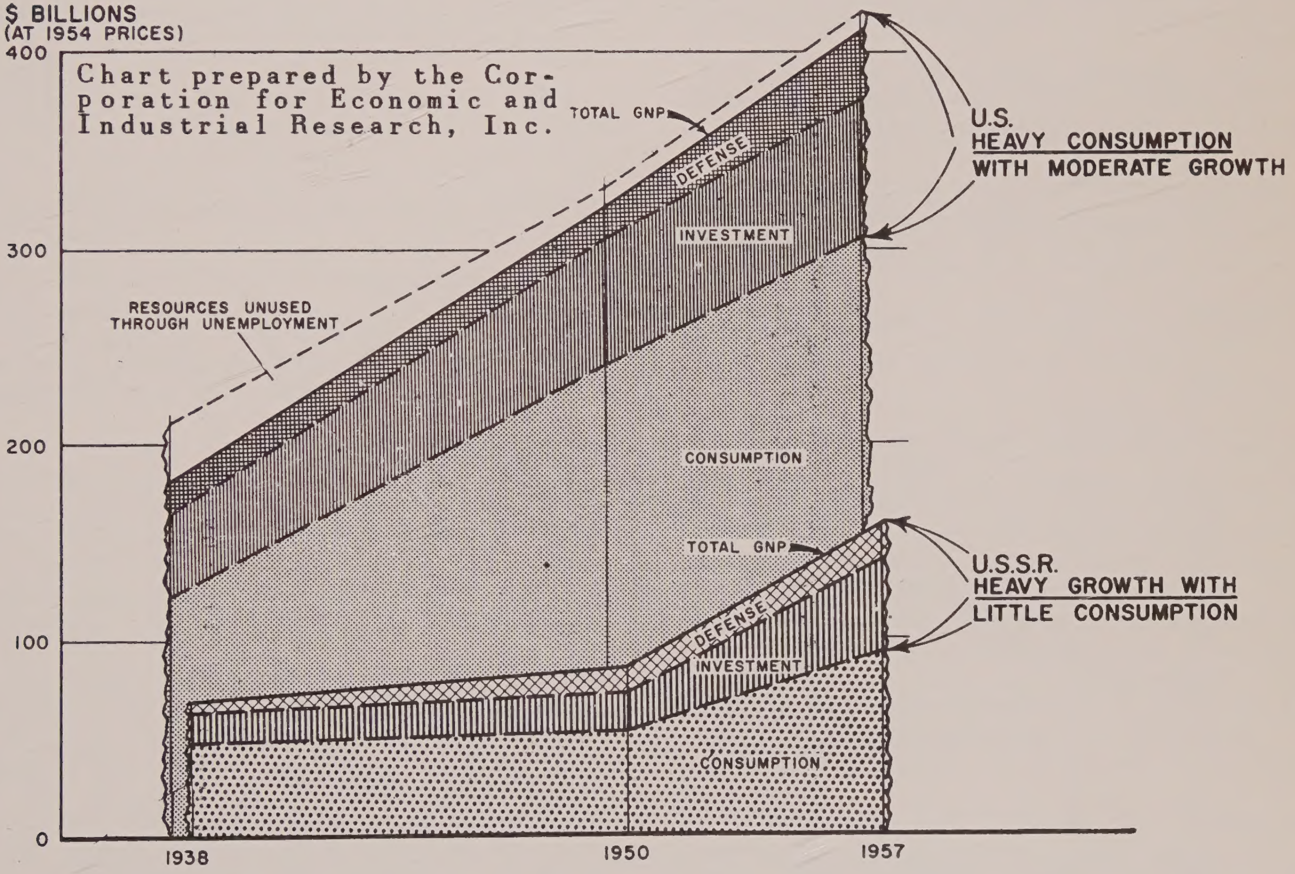

FIG. 1: UNITED STATES AND SOVIET GROWTH, 1938—1950—1957

(Source: "Worldwide and Domestic Economic Problems and Their Impact on the Foreign Policy of the United States" A study prepared by the Corporation for Economic and Industrial Growth, Inc. at the request of United States Senate Committee on Foreign Relations, August 1959.)

If you remember that Russia has more people than we (209,000,000 vs. 180,000,000), you will see that on a per capita basis the comparison is even less favorable to Russia.

Other observers feel that industrially (but of course not militarily) we may be even three times as strong.

Growth

As Figure 1 gives values for both Russia and the United States for 1938, 1950, and 1957, it is easy to see the current growth situation by mere inspection of this chart alone. For at least the period 1950 through 1957, Russia grew, industrially, at a much faster rate than we.

But I always like to get historical perspective. This is given in Figure 2, which shows a series of index numbers from 1870 through 1955; the year 1913 is taken as 100 for both countries. Figure 2 does not show the relative *size* of the two economies—merely their relative rates of per capita growth. It shows this by assuming that they were both the same size in 1913, but of course they weren't.

From 1870 to 1913, the industrial growth of Tsarist Russia roughly paralleled our own (although they averaged 3.7% a year as against our 2.9% a year, at that). From 1917, the time of the Russian revolution, to 1920, Russia experienced an industrial debacle which cut production to 1/5 of the 1916 levels! It took the Russians ten years to get back even to the levels of 1916.

World War II also took serious toll. Russian industrial production was cut over half from 1939 to 1945.

With these wild gyrations and a proper (or improper!) selection of years for comparisons, it is possible to make a case for almost any point of view relative to the growth of Russia vis-a-vis the United States, depending upon the axe you are trying to grind, or your emotional or ideological bias.

The lack of reliable Russian statistics and the changes in the geographical area of the Russian Empire add to the complexities.

Nevertheless, people must make estimates and projections; and people do.

A study made for the Committee on Foreign Relations, U. S. Senate concludes:

"The faster rate of growth in the U.S.S.R. over that in the United States has been in

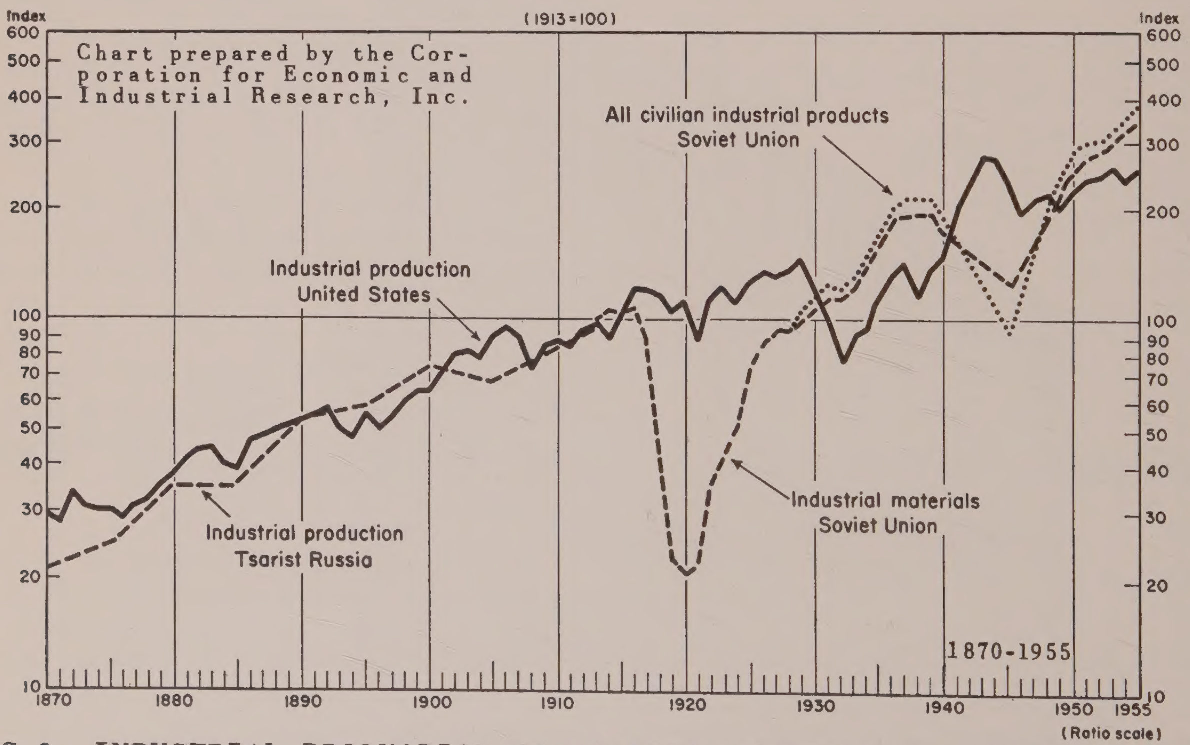

Chart prepared by the Corporation for Economic and Industrial Research, Inc.

FIG.2: INDUSTRIAL PRODUCTION PER CAPITA: RUSSIAN AND UNITED STATES

(Source: "The Structure and Growth of Soviet Industry: A Comparison with the United States" by G. Warren Nutter, University of Virginia. A paper submitted to the Joint Economic Committee, Congress of the United States, September 1959.)

evidence for a long time. . .

"Since 1950, Soviet industrial output has grown about 9 percent per annum; in the United States the growth rate has averaged somewhat less than 4 percent per year. . .

"Assuming the Soviets maintain an industrial growth rate of 9 percent, their 1970 output will approximate the 1957 U.S. industrial production. If the United States maintains an industrial growth rate of about 4 percent per year, Soviet industrial production in 1970 will equal some 60 percent of U.S. industrial production for that year, compared to 40 percent in 1957. However, if we exclude consumer goods such as automobiles, refrigerators, washing machines, TV, and so forth, they will probably have actually exceeded the United States by that date. . .

" . . .the outlook for the free world is grim. . ."[1]

Without denying the conclusion stated above, the choice of 1950 as a base year is arguable. If you compare the growth of the two countries from 1938 to date, 1928 to date, or 1913 to date, you will get comparisons much more favorable to the United States.

Even looked at without bias, it is hard to know the truth. Was the tremendous (10 fold) growth from 1920 to 1938 the start of a new growth trend due to the virtues of forced and state directed labor? Or was it merely the recovery from the devastation of the Revolution? At all events the facts are clear (from Figure 2) that, industrially, Russia was no further advanced in 1938 than it would have been under the old Tsarist regime.

If World War II had not come along, by now we would have the answer. But it did come along. And industrial Russia was again cut back. Is the heady (4 fold) growth from 1945 to 1955 a continuation of the 1920—1938 tendencies—only displaced? Or is it merely a recovery from the set back of the war?

Put another way: should current levels be thought of as the historical continuation of 1870—1913? Or 1870—1913—1938 with a "tuck" taken in the chart from 1939 to 1949 to allow for war distortion? Or 1920—1938 and no tuck? Or 1928—1955? Or in some other way? Which way we choose makes a big difference when we try to project this growth line out into the future.

Figure 3 on the next page shows some of the ways of looking at Russian growth.

Probably no one knows the truth for sure. At all events I don't. The situation is a little like the standardized ink blots used in the Rorschach psychological tests. Looking at the same blot, one man will see a map of Africa, another the head of a tapir, another his mother-in-law!

My own guess is that the 1950—1957 comparison favors the Russians unduly, and that in the long run there will prove to be less differential in their favor. That is, I don't think they will catch up to us so fast as the study made for the Committee on Foreign Relations suggests.

The assumption that growth rates in both countries will continue the same as now can also be disputed. It is a basic law of growth that everything grows at a slower rate as it gets older. This law applies here too. It's any man's guess, but I would expect the underlying growth trend of the Russian economy, as well as our own, to slack off little by little, year by year, as we both press forward, side by side, into the future.

What Can We Do about It?

What can we do about it? Much.

What *will* we do about it? Use the situation as a basis for urging Winterbottom for President.

And use the *need* for growth as an argument in favor of doing all sorts of things that will hinder our growth still further!

As G. Warren Nutter of the University of Virginia puts it in his paper "The Structure and Growth of Soviet Industry: A Comparison with the United States:" "The driving force within the American economy has been private initiative mobilized by the incentives inherent in a free society. The trend of the day is in the direction of choking off incentives. One foreboding economic symptom is the slackening speed at which resource productivity has been growing in American industry. Incentives are being strangled and nothing is being put in their place to drive the machinery of growth."

I suppose a sufficiently intelligent and perceptive cell in my body could quite easily observe the aging process. He would note the flabby, inelastic muscles, the cholesterol in arteries and heart, the creaking joints, the falling hair, the plodding step. Unless he were running for political office he would say, "This organism is aging." He might add, as one of my friends always does, so cheerfully, "It won't be long now!"

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[1] Source: The Corporations for Economic and Industrial Research, Inc., *op. cit.* pp. 28-30.

Similarly, a perceptive citizen of the United States notes the creeping crystalization that is overtaking *us*. He sees the ever-tighter restrictions within which we are forced to operate—the controls, the red tape, the governmental and union restrictions that kill initiative, penalize productivity and undermine efficiency. His own frustrations show him the aging process, even without the aid of statistics.

The other day, without half trying, I counted fifty restrictions under which I must operate my affairs that did not apply to my father's operations. And, praise God, I don't even have to deal with organized labor. Some of these restrictions are socially desirable, but many of them stem from pressure groups (either inside or outside of government) which have got hold of the police power of the state and are using it for their own ends.

In the New York City telephone book it takes 2,352 lines merely to *list* the governmental telephones!

Of course Russia uses the police power, too. The difference is they use it, as best they can, to increase their rate of industrial growth. We use it, to a large extent, to benefit various minority groups at the expense of the totality, and in many cases for industrially unproductive boondoggles.

What can be done? Much! What *will* be done? Next to nothing!!!

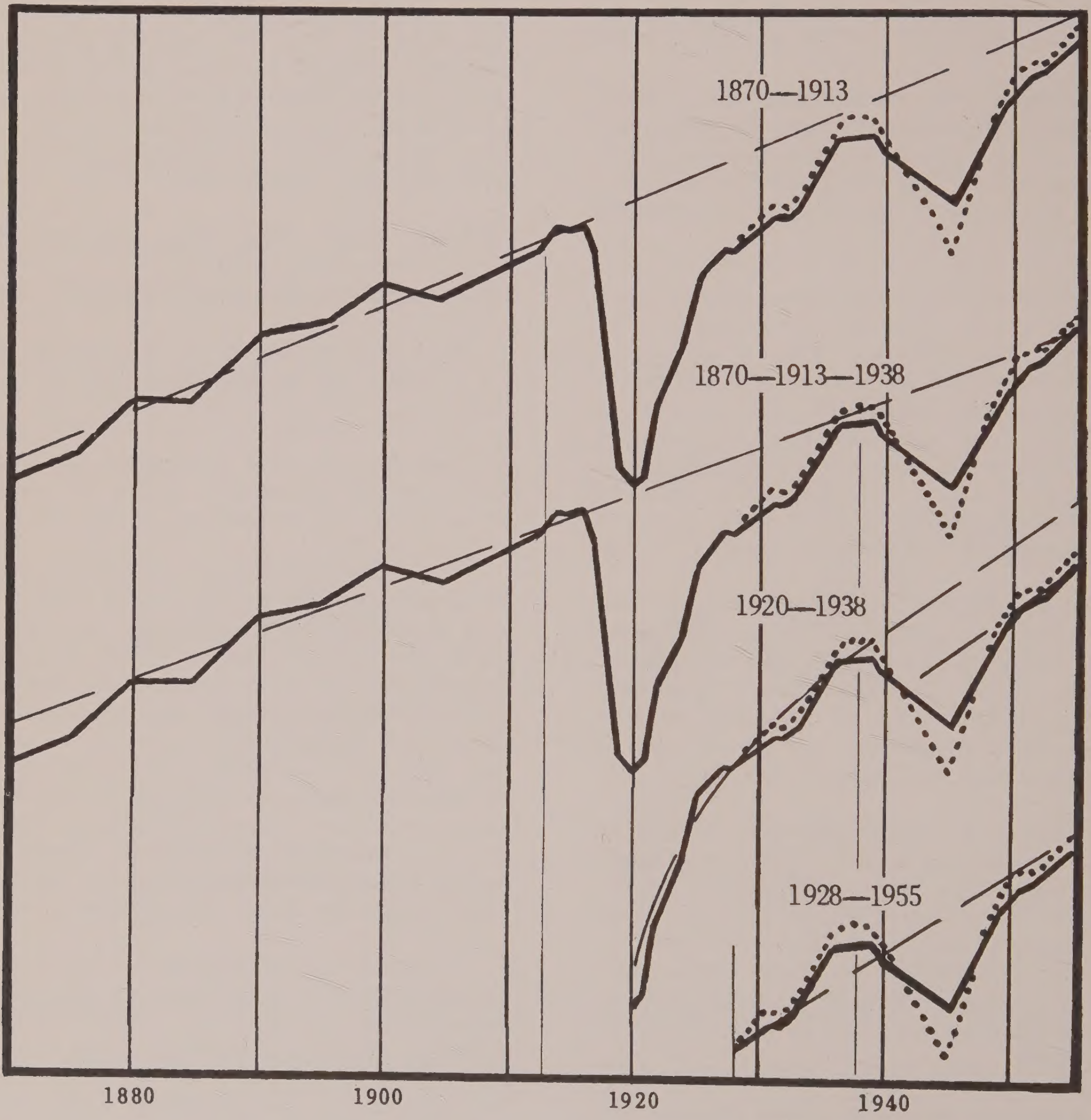

FIG. 3: SOME OF THE DIFFERENT WAYS OF LOOKING AT RUSSIAN GROWTH
(Russian per capita production copied from Figure 2; trends added by eye.)

NONRESIDENTIAL BUILDING MAY HAVE PASSED THE PEAK

by Gertrude Shirk

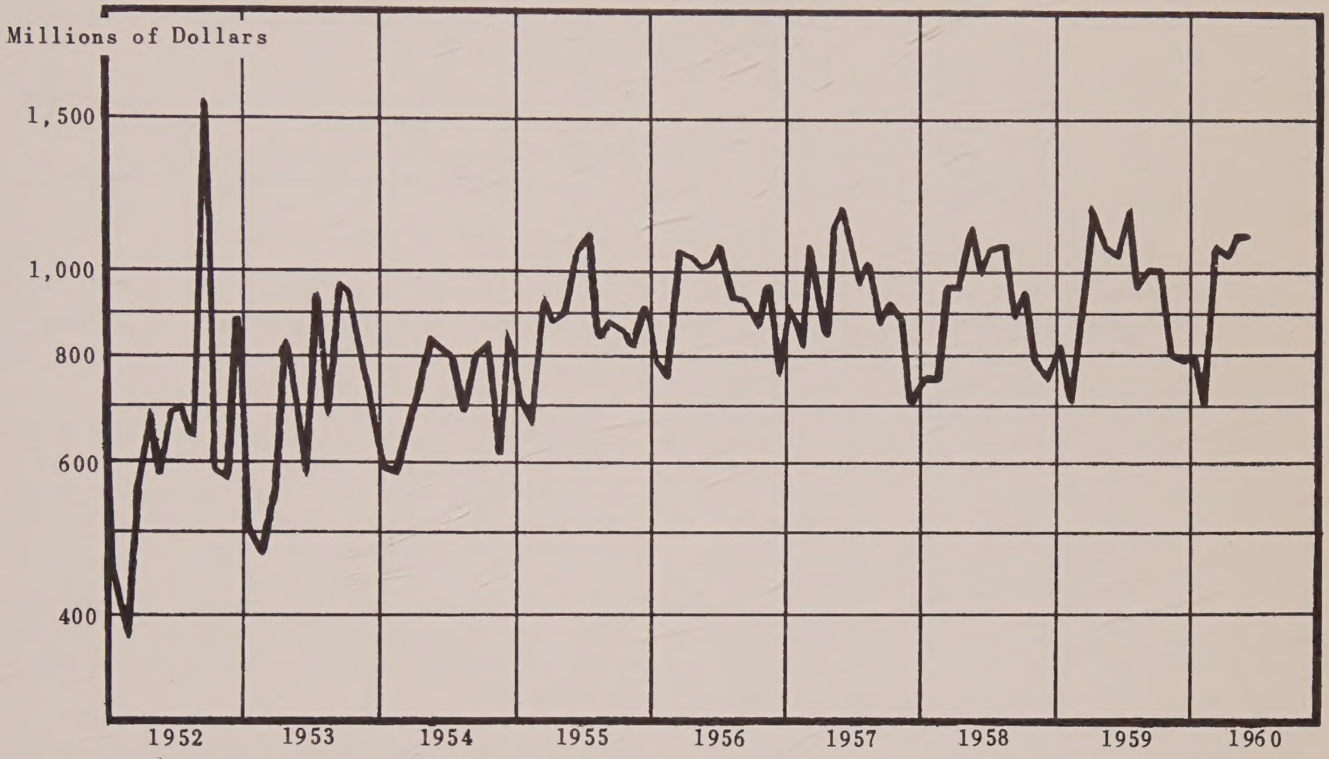

FIG.1: NONRESIDENTIAL CONSTRUCTION CONTRACTS VALUATION (F.W.DODGE)

The above chart is a picture of the dollar amount of nonresidential construction contracts let, by months from 1952 to date. These figures are compiled by F. W. Dodge Corporation, and represent contracts for future construction. They are not for building put in place.

A quick examination of the chart reveals two obvious facts. First, the seasonal cycle is clearly visible in the figures, as you would expect in a building series. Second, the figures appear to have been running in an almost horizontal direction for about the past four years.

This flat, high top is important, because this series is one of the eight leading indicators which were discussed in the "Director's Letter" in the July issue of *Cycles*. That is, nonresidential contracts tend to turn up and down ahead of general business. If this series starts to slide from the current and recent past high levels, it will be a bad sign for the economy in general, to say nothing of the building trades.

Any cycles that may be present are doubly important in a leading indicator series. Unfortunately, we could find evidence of only one short cycle (other than the seasonal cycle) in these figures. And, at the present time that cycle appears to have faded out. It is about 21 months long, and was very strong during the thirties. In the twenties, when there was also a flat high top in these figures, the 21-month pattern is also not visible. When the figures push against what appears to be an upper limit the cycle seems to disappear. For the time being it is not important, but if the figures go into a decline, it may again become important.

Of course the seasonal cycle is important also. It must be taken into consideration before any conclusion can be reached about what the figures are really doing. And a seasonal cycle in a building series can be depended on as the seasons.

Considering the individual months as a percentage of the average yearly figure, the pattern usually runs as follows:

Month	Per Cent	Month	Per Cent
Jan	84	Jul	117
Feb	80	Aug	103
Mar	106	Sep	100
Apr	105	Oct	104
May	114	Nov	85
Jun	112	Dec	86

This pattern is an average based on the behavior since World War II, but excluding the Korean War. When the autumn slump comes, its comparison with this typical pattern will give a clue as to how this indicator is really doing. If it goes beyond the usual depths, or if it comes early, the decline will be more than seasonal, and will show basic deterioration. In times of decline, the seasonal is greater than usual, and earlier than usual. Conversely, in times of recoverv. the spring increase is early, and greater than normal.

To eliminate the seasonal pattern from the picture, and to see what is actually happening to the series, we used a smooth one-year per cent curve. This is plotted on Figure 2.

Because the figures are distorted by the Korean War boom, war slump, and subsequent post war recovery, only the years since that time are shown.

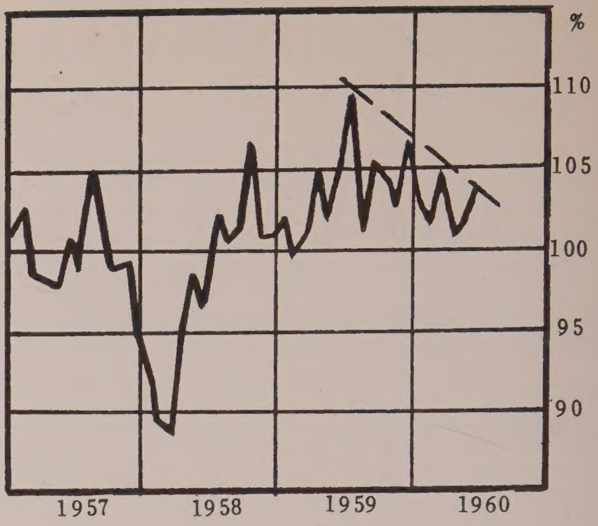

FIG.2: SMOOTHED ONE-YEAR PER CENT CURVE OF NONRESIDENTIAL CONTRACTS

July of 1959 apparently was the peak month in terms of change from the previous year. Since the July 1959 peak, the successive peaks have been lower and lower as shown by the straight line drawn across them.

The flat high top that seems so apparent on Figure 1 appears to be sliding a little. Not much, but enough to raise some question about the next year.

A precise knowledge of the seasonal cycle should enable you to gauge the importance of the autumn decline. This economic kingpin is an important one, and the next few months are strategic.

A POSSIBLE 3.6296-QUARTER YEAR CYCLE IN A VARIABLE STAR, THE EARTH, AND THE SUN*

by Leonard W. Wing

A dominant cycle of 3.6296-quarter years (331.42 days) has been measured in the light curve of the variable star Omicron Ceti.

Tests indicate that cycles of 3.6296 quarters are also present in barometric pressure on the earth, and in sunspot data.

The presence on the sun and the earth of a wave length occurring also on a distant variable star suggest that either the waves are independent and unrelated, though common to all, like light waves from match light and star light, or the waves are cosmic waves passing through space, registering their presence in turn by rises and falls in phenomena of earth, sun, and variable star.

As there is no coincidence of wave length to the clock and calendar other than of recognizable diurnal, lunar, or annual cycles, no generant appears in the earth or sun as the origin of any independent waves. Hence, the waves appear to be of an extra-terrestrial and extra-solar or cosmic source.

One of the best known of the variable stars is the great Omicron (Mira) Ceti discovered in 1596. The long record on this star seems suitable for use in exploring possible cosmic cyclic behavior.

By counting the highs astronomers have settled on 331.7 days as the period of variation. Periodic variations of great magnitude (there would appear to be a variation in brightness of many thousand times) may be measured rather closely by the simple counting of highs. More exact techniques, however, will measure the length more closely.

A 330-day time chart forms a convenient grid for measuring the length of the cycle in Omicron Ceti. (See Figure 1 on the next two pages.) The lows and highs are posted on the time chart according to the number of days that they occurred after the base day number at the top of the chart.

The band of highs is remarkably uniform in behavior for observational data of natural phenomena taken by volunteer observers over a long period. The band of lows (minimum brightness) is less uniform, which is to be expected. The highs (maximum brightness) are both easier to record and surely of more personal interest to volunteer and independent workers.

The slope of the bands of highs and lows falls off to the right 1.4245 days for each interval. Thus the wave length of the dominant cycle in the light curve of Omicron Ceti is 331.4245 days, which is 3.6296 quarter years.

The time of a recent ideal high would be October 7, 1947, according to the line of highs on the chart.

The 3.6296-quarter year period is certainly not of solar or terrestrial origin, having been derived from cosmic data. It can be used

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*This summary is only a small part of the long article "Solar-Terrestrial Relations Indicating Possible Cosmic Waves" which appeared in the July 1959 *Journal of Cycle Research.*

therefore in a preliminary way for test of the presence of cycles of the same wave length in solar and terrestrial data.

Waves dominant in *terrestrial* phenomena have universally shown latitudinal passage. (Latitudinal passage is the tendency for a cycle to crest later as it approaches the equator.) Conversely, latitudinal passage patterns with respect to a given wave length are therefore evidence of the possible presence of that length.

A test for latitudinal passage necessitates data of the same phenomenon from a wide range of latitudes. Meteorological records meet these conditions fairly well. Therefore, I used barometric pressure readings from fifteen stations for the New World and eleven stations from the Old World.

These terrestrial barometric data, after suitable adjustment, were set into 3.6296 quarter year tables. The tables were averaged to obtain the timing of the highs and lows.

Figure 2 shows the times of weakness or "low" for the various stations (terrestrial barometric pressure) and also solar (sunspot) data with respect to the wave length of 3.6296 quarter years.

On Figure 2 the circles recording the time of low for each station are coded to match the table for each location.

If there is present in solar and terrestrial data any cyclic influence of the same wave length as the dominant cycle in the light curve of Omicron Ceti, latitudinal passage at that length should be apparent. While the presence of latitudinal passage alone may not of itself constitute proof that a cosmic wave is present, it is strong evidence that such is the case.

Figure 2 shows an unmistakable tendency for timings of stations in the lower latitudes to occur later than those of higher latitudes (i.e., latitudinal passage). The pattern is clearly not one of random distribution. The timings of the Old World are rather more uniformly distributed than those of the New World, chiefly because the several time series are longer. The longer the record the more nearly do terrestrial timings approach those of the same wave lengths in solar data.

It appears that waves in some way pass over the sun and the earth like "ripples". In their passage from pole to equator, they register at the terrestrial surface by rises and falls in terrestrial phenomena, such as barometric pressure. That they do not fall at random indicates the presence of some real identity active alike in solar and terrestrial phenomena. The appearance of timing of dips in the barometer with respect to the wave lengths under test, latitude by latitude, moving equatorward from polar regions, simultaneously in the Northern and Southern Hemispheres would seem to indicate the passage of these "ripples" over the two spheres. The barometer, for example, by its rises and dips registers the passage of the "ripple" somewhat as a tide gauge by its rises and dips registers the passage of a water wave or of the tide. Other terrestrial events register in their

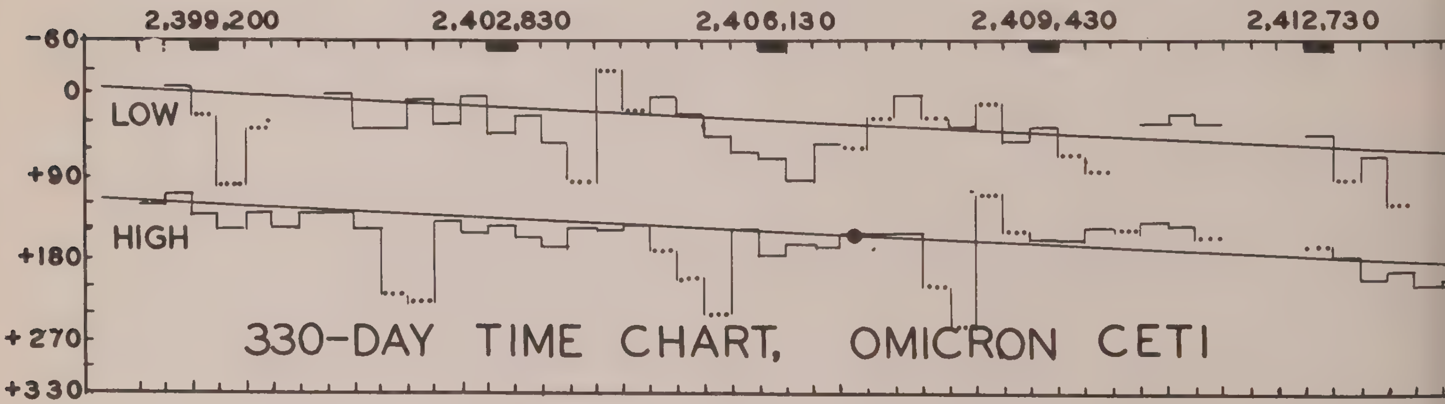


FIG.1: 330-DAY CHART OF THE LIGHT CURVE OF OMICRON CETI

The precise dates of the days of maximum brightness (the highs) and minimum brightness (the lows) are known from astronomical records. Days are numbered according to the astronomical system of Julian Day Numbers. Dots in the posted record of days of highs and lows denote dates based upon incomplete records. A high or low is posted on the chart according to the number of days it comes after the base day numbers noted across the top.

own respective ways the passage of the same "ripple".

That the wave length is the same as one on a variable star would seem to mean the presence of cosmic waves which at some time in their history have touched both the respective stars and the solar system. Their impinging upon earth and sun is registered by the rises and falls mentioned (along with many other probable registering agents) and their impinging upon variable stars registered by rises and falls of the light curves.

Although I have spoken of the passage of "cosmic waves", one should not preclude the possibility that these waves may originate in variable stars themselves. However, one may still wonder about the presence of some source of primordial energy of infinite capacity.

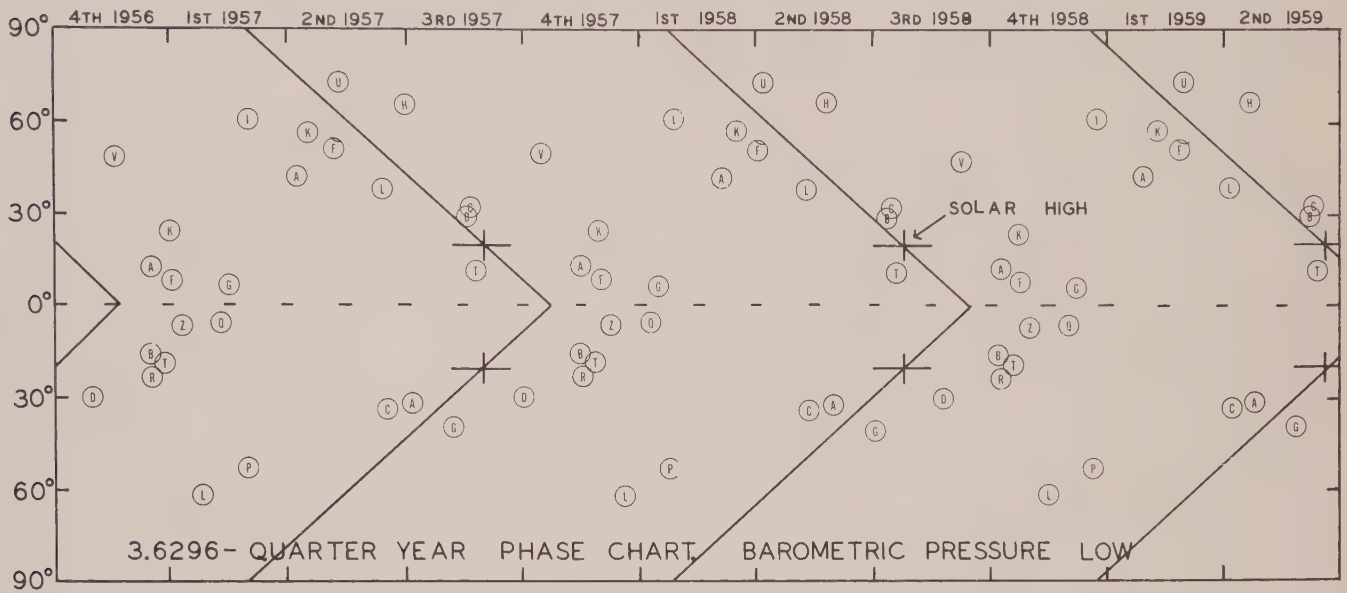
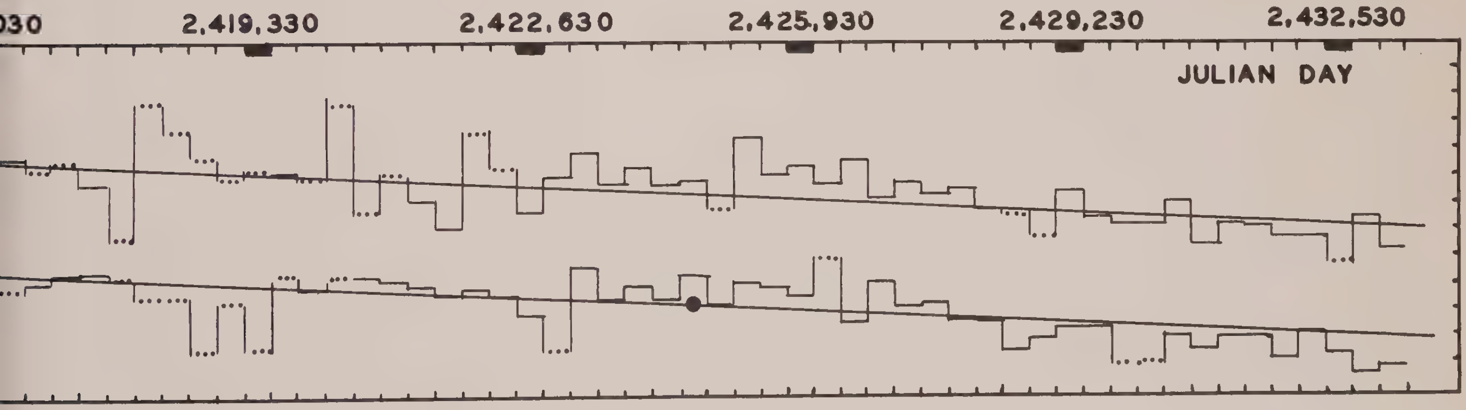


FIG.2: 3.6296-QUARTER YEAR CHART OF BAROMETRIC PRESSURE LOWS

The low is dated by the 3.6296-quarter year table for each weather station. Twenty-six stations were used, and the circle representing each station is entered at the latitude for that station. The lows of barometric pressure tend to occur later equatorward as is shown by the chart. The lows also tend to parallel sunspot passage which is shown by the diagonal lines.



The band of highs falls to the right as shown by the sloping line drawn across the individual highs. The line falls 75 1/2 days in the 53 intervals between the midpoints of the first and second halves of the record. This gives a measure of 331.4245 days or 3.6296 quarter years as the wave length of the dominant cycle in the light curve of Omicron Ceti.

MEASURE Your Ups and Downs!

You have read in various places from time to time that people have an emotional cycle. Do you know yours?

To the sophisticated mind such an idea may seem obvious, if not actually naive. We all have our ups and downs. But even an integrated and well adjusted person can benefit enormously from knowing with some precision when his next low period will be.

To quote Dr. Rexford Hersey in *Zest for Work* (Harper & Brothers, New York, 1955):

"A knowledge of their periodic fluctuations has made those who know of them more dependable and more competent. It has usually given them an increased knowledge of themselves and of life in general. It has added to their serenity and made them better able to control both themselves and others. It has given better understanding of and control over their hourly fluctuations as well."

In *Zest for Work* Dr. Hersey is concerned with the problem of the 20% of our workers who are lazy and stubborn, what makes them that way, and what can be done to help them.

As he points out, the disintegration of the French nation in 1940 before the zestful Germans has been blamed by some on sheer laziness. He believes it is a question of national character that prior to World War II, one in ten workers could be called plain lazy, but since the war, two in ten are "not worth their salt."

Undoubtedly it would affect any strenuous national effort if 20% of the producers are good-for-nothings who want every material benefit, but are unwilling to work for it. This may well be a national defense problem, as Dr. Hersey suggests.

From a more local point of view, the attitude of the workers in a particular shop or office can materially affect the output per hour. This book should be read by anyone who supervises other people—at any level of management. Hersey analyses some of the intricate and varying factors that motivate people on the job. As a result of 27 years of research and testing he is able to discuss with scientific exactness the management policies and techniques that workers find most irritating, the relation of average worker production to emotional status, the source of worker crises, and other factors that affect a worker's zeal on the job. He points out that it is a wise management that realizes that the supervisor is the "governor" of the zest.

So, in the end, the problem boils down to the relation between two individuals, and then to each individual's case.

For example, the problem of safety can be handled by rules, mechanical aids and education. This approach is a group approach. But an actual accident is caused by an individual, and the emotional level and day by day adjustment of the individual to his work is a vital factor in accident prevention.

"The better adjusted and interested the worker is in his total environment, both plant and home, the better able he is to control his lows, whether cyclically or environmentally caused. The maladjusted, disinterested employee is always likely to be an accident risk and a star member of the Lazy One-Fifth."

Dr. Hersey outlines carefully how to find your own emotional cycle. Using a scale of emotions from plus 6 to minus 6, he rates moods as follows:

Happy-elated	Plus 6
Happy-minus	" 5
Cheerful or hopeful	" 4
Interested, joking, cooperative	" 3
Neutral plus: pleasant feeling tone	" 2
Neutral indifferent: tension, equilibrium mixed	" 1
Neutral minus: unpleasant feeling, but no definite negative emotions clearly defined	Zero
Peevish, suspicious, uninterested	Minus 1
Angry	" 2
Disgusted	" 3
Sad	" 4
Apprehensive	" 5
Worried	" 6

It does not require any time or effort to keep a day-by-day rating of your own mood—it does require some perserverence, however. Once you have reached the point that a cycle is evident the study should pick up interest.

Most people have a cycle that runs about five weeks from low to low or from high to high. After several repetitions you can begin to forecast where your mood cycle might be at some given time in the future. Then you can begin to regulate your behavior and schedule your activities accordingly.

In *Zest for Work* Dr. Hersey makes the point that supervisory workers must act as their own governors. The higher the level you achieve (or that you hope to achieve), the more important is self knowledge. Knowing your own emotional cycle could be an important tool.

*The Wiesenberger Earthquake Index**

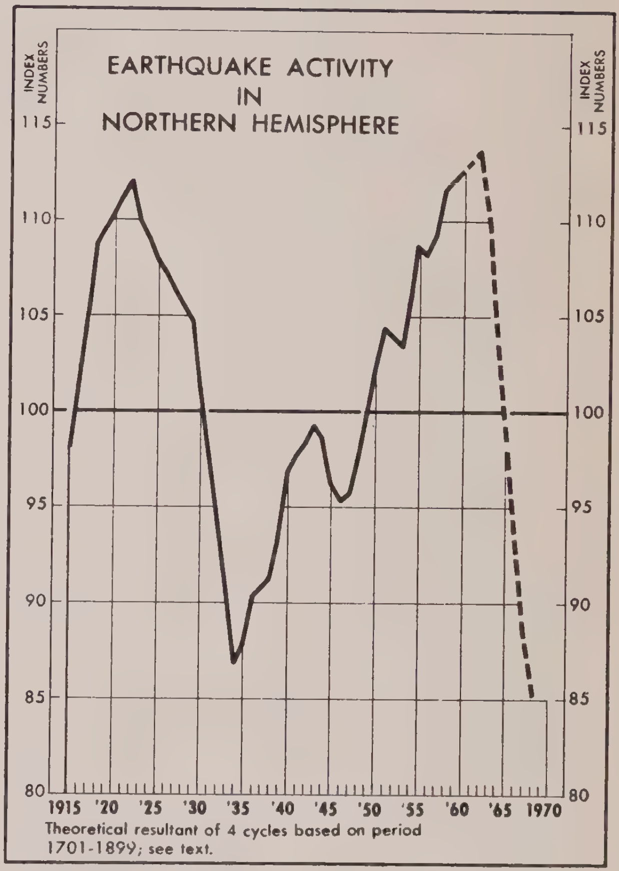
To the (many inquiries) regarding our earthquake and volcanic index, we report that the recent eruption of Mount Etna constituted only a minor bear signal. When and as, however, this may be confirmed by an eruption of Vesuvius we would have a major bear signal.

A year ago—in August 1959—we cited the Montana earthquakes inferring they might undermine the stock market. They did. The Dow-Jones Industrial Average came down from 684 to 613. The quakes in Algeria, Morocco and Chile took their toll in early 1960.

We have also mentioned a 17 3/4-year cycle in Chinese earthquakes that called for a February 1960 crest. Since the bamboo curtain was lowered we have not had the same access to Chinese earthquake data as formerly, but if the action of stock prices in recent months is any criterion the crest occurred about on time.

Reproduced is a projection of our Index of Earthquake Activity in the Northern Hemisphere. The coincidence of above-normal earthquake and business and financial activity and sub-normal activity is apparent. Crossing the par line indicates major changes in the outlook—upward in 1915, downward in 1929, upward in 1949, and downward in 1965.

Thus, even though earthquake data may have an ominous implication, the long range outlook is reassuring over the next several years. Also of comfort—wars tend to occur in periods of sub-normal earthquake activity—at least five years away.



Theoretical resultant of 4 cycles based on period 1701-1899; see text.

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Time and time again. . .

by Gustav Gumpert

A Mathematician friend gave us a sobering jolt recently while discussing time, relativity and (of course!) cycles. The conversation went something like this:

Math: One of the ways you fellows measure off cycles is by marking time, isn't that so? In other words, you say a cycle is completed every so many hours, days, years or months.

Cyclist: That's true.

Math: Well, you know that Relativity Theory holds that time is a dimension. Like all dimensions, you perceive it differently depending on where you are. If you're hurtling through space, for example, earth time would seem very different to you.

Cyclist: So I've heard.

Math: Well, depending on where you are and how fast you're going, a 17-day cycle might seem faster or slower than it seems on earth.

Cyclist: I guess that follows.

Math: Think about this, then. At some place—and at some velocity—a 17-day cycle would seem like a continuous event. There wouldn't seem to be any space between highs and lows, just as you hear radio waves as a continuous sound or see light as a steady beam.

Cyclist: I guess that follows, too.

Math: And, by reverse reasoning, what seems to be a continuous event might, from some observation point, really be a wavy cycle. So—maybe you're a wavy cycle, nothing more.

Cyclist: (Reluctantly) Maybe I am.

The Rainmakers

In the August issue of *Cycles*, our editor reported the fascinating findings of Australian scientist Dr. E. G. Bowen, who has discovered a rhythm in rainfall that he attributes to the entrance of meteoritic dust into the earth's atmosphere at regular intervals.

While looking through our files of newspaper clippings on the subject of "rain," we came across a tantalizing puzzler that might be called: "Why Did It Rain on December 12, 1959?"

On that date at 10 A.M., the press reports, three Pueblo Indians performed a brief ceremonial rain dance at the Gianini Food Fair, 1145 Market Street, in San Francisco. Two hours later rain fell in San Francisco for the first time in 85 days!

Beautiful Dreamer

Freud held that dreams are an expression of the unconscious mind. Now another scientist says that we dream in cycles.

Allan Rechtschaffen, Assistant Professor of Psychology, and his associates at the University of Chicago report that people tend to dream about the same subjects, in the same sequence, and at about the same time at regular intervals.

Timing of Earthquakes

The ultra-respectable English science weekly *Nature* has published earthquake data by a German geophysicist, R. Tomaschek, showing that at the time and place of major quakes the planet Uranus is located directly above the site in far more instances than would be expected by chance.

Tomaschek apparently rules out sunspots as a cause of earthquakes as well as the tidal pull of the sun and moon. While pointing to a correlation between the position of Uranus and movements of the earth's crust, Tomaschek suggests that it may not involve a cause and effect relationship.

"That the accumulated stresses within the Earth's crust are released at times which, at least for a period of several years, are strongly correlated with certain positions of Uranus, may therefore," he points out, "not be a relationship of cause and effect in the usual mechanical sense."

Does Tomaschek mean that Uranus *times* the events without *causing* them, just as a clock tells you it's noon without forcing you to eat lunch? An interesting idea.

WE GET LETTERS!

Which Stocks and When?

Gentlemen:

I am unable to tell from your service when stocks should be purchased and sold.

If you can enlighten me with reference to any stocks that might be a real bargain and should be purchased, I would appreciate it. Also advise me how I can determine when they should be sold.

Minneapolis Glen E. Petters

Comment: We study cycles in all sorts of things including stocks but we do not consider that we issue a "service."

A person would be foolish to buy and sell stocks solely on the basis of the cycles that have been present in the past. One would be equally foolish to ignore these cycles when one is trying to make up his mind in regard to what is going to happen.

We do not know anything about the cycles in individual stocks except this: The cycles that are present in the market as a whole are undoubtedly present to a greater extent in some of the stocks that make up the averages. The timing of the cycles in the individual stocks is likely to be earlier or later than in the market as a whole.

A knowledge of cycles is only one of many tools that one needs to use if one wishes to out-guess the market. E. R. D.

The 17-Week Cycle and Others

Dear Mr. Dewey:

I was interested in the articles further confirming the existence of the 16.166-week cycle in stock prices back through 1897. This fits the experience or "folk lore" of the street about which I wrote you some time ago referring to it as the cycle of "84-day tops" meaning of course market days which when you allow for holidays comes out 17 plus weeks.

You state that this wave length "is not found to be related to the wave length of any other well established cycle." It is exactly five times the short cycle I mentioned in the same letter which you published in *Cycles*. I called it the 84-hour cycle. This again is market hours and counts five hours to the trading day. If you go back to the days when we were open two hours on Saturday but closed each other day at 3:00 instead of the present 3:30, I think you will find the figures fairly consistent.

My own guess is that both the 17-week and the 17-day cycles are largely dynamic although they may be affected by outside forces. By this I mean they are closely associated with forces within the market place such as momentum and the mass psychology of the average trader or investor. I think I mentioned that we also use a still shorter cycle of around 20 or 21 hours which would have four round trips in each 84 hours or 17-day cycle and 20 in each 17-week cycle. There is also an intermediate cycle we often watch of 28 to 30 market days and a longer one which some use as 200 days and others as six months.

If my assumption is correct that these cycles are largely dynamic or arising from within the market suppose we look for possible psychological explanation.

A purchaser buys a stock with high hopes and whether he is an investor or trader, he watches with interest its behavior after its purchase. Normally he pays for his stock the fourth business day following purchase, which is the settlement day. This is 20 trading hours after purchase and works the first short cycle of his emotions. If all goes well, he enters the next period of holding and watching progress until about two weeks have passed. This is the 17-day cycle. If he is still pleased with his purchase he graduates into an intermediate holder or semi-investor and waits it out for 17 weeks. At the end of this period he either likes his purchase well enough to hold for the full 26 weeks which carries him over the six months holding period for tax purposes or not. I have seen investors suffer great anguish near the end of this six months period. Sometimes they lose much of their profit because they try for the lower tax only to find it would have been better to have sold sooner and paid the higher tax.

I realize that cycles made up of the responses of many people will not always come out in a regular pattern but think it is in some such area one should look for causes.

Incidentally, I was pleased to note that your latest studies of the 17-week cycle showed that the up-phase takes 10 to 11 plus weeks, and the down-phase 6 to 7 plus weeks. This agrees with market experience that all upswings are apt to be more gradual and downswings are sharper but concluded in less time. I have always assumed that the emotion of hope is gradual but persistent while the emotion of fear is violent and runs its course in less time.

New York, New York George B. Seager

Comment: If we assume the 17 1/6-week cycle is dynamic we leave unanswered the question of why more people than not are prompted to act in the same way at the same time. Perhaps the original impetus is not dynamic, but all that follows (until the next impetus) is dynamic. But then succeeding starting impulses would not by chance fall into any periodic pattern. There appear to be too many starts that do fall into a periodic pattern for the original impulses to be purely dynamic. Here we are getting to the core of our general problem of cause. G. S.

Books

Dear Mr. Dewey:

I am wondering if the figures used in the article about book publishing included paperbacks? If the figures do not include paperbacks, that would account for the fact that, per capita, fewer and fewer books are being published.

New York, New York R. M.

Comment: The figures on the number of books published are collected by *Publishers' Weekly*. According to *Publishers' Weekly*, "Most paperbacks have always been counted as books in *Publishers' Weekly* book publication figures."

Beginning with 1960 they are including publications from 49 to 64 pages. Previously they defined books as 65 or more pages. Also in 1960 they are counting paperback workbooks and laboratory manuals as books. These changes, they believe, will not materially affect the 1960 figures.

So you see, even the tremendous paperback boom of the last twenty years has not helped the story. G. S.

A Good Idea

Dear Mr. Dewey:

I enjoy enclosing a subscription for a friend of mine. *If every member would just make it a point to secure one additional member this year,* it would double the list. All they have to do is show the report to a few intelligent friends. Also, they do their friends a real service as well.

Toronto, Canada P. R. Snider

Pro and Con

It occurred to me that you might like to hear this little bit of human interest.

This morning after my six year old son spent the night sleeping outdoors in a sleeping bag, I found with his collection of comic books and stuffed toys, the July issue of *Cycles.*

Could it be that he might be starting young to play the market?

* * *

I hope you don't realize how good the *Cycles* report is—you would be insufferable!

* * *

I allowed *Cycles* to lapse three months ago, but certainly miss it. Hence, check enclosed.

* * *

It is very interesting to see how your chart on hog prices is working out. Being a banker-farmer it made me think—as a result I raised more hogs this year and had them ready to arrive in July, which was your high month.

Comment: The average wholesale price of hogs at Chicago during the month of July was $16.57 per 100 pounds compared to low of $11.19 last December, and $13.02 last July. G. S.

The Cycle Round-Up

This month we review: ***Wheat Prices***

Residential Construction Contracts

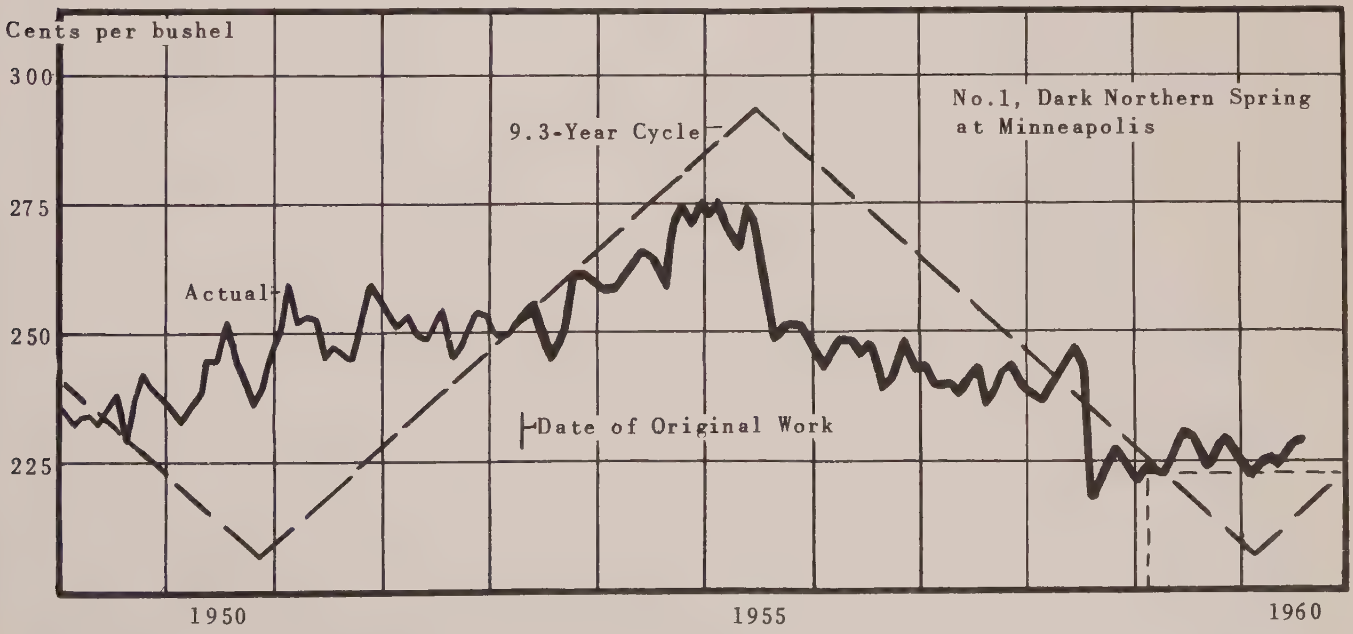
Smith's Decennial Pattern in Stock Prices

ACTUAL WHEAT PRICES MATCH A THEORETICAL LOW

In the September 1957 issue of *Cycles* we said, "A 9.3-year cycle has been present in wheat prices for many years. . .The odds are 7 to 2 for a decline from the price ($2.678) at the last ideal time of crest (June—July 1955) to the price, whatever it may be, at the next ideal time of trough (February 1960).

The price of wheat at February 1960 was $2.242. The decline suggested by the 9.3-year cycle did occur. The 1957 article also said that the most probable price was $2.22, and that the probable range (odds 5 to 4) was $2.39 to $1.50.

Including the February 1960 trough in the count, there have now been ten down-legs of this cycle in the data we have. Eight times out of the ten possibilities, a decline in the actual price of wheat has occurred. (The 1950 experience shown on the chart was one of the two times the cycle did not influence prices at the low point. The other time was in 1904.)



THE 9.3-YEAR CYCLE COMPARED TO ACTUAL PRICES

The actual lowest value in the current bottom may well have been at August 1958 when the price was $2.172. All the actual price figures that we use are for No. 1 Dark Northern Spring Wheat at Minneapolis. They are monthly averages based on the daily figures. Individual daily quotations of course move above and below the average for the month.

From the ideal low at last February until the next ideal high at October 1964 the 9.3-year cycle will be exerting an *upward* force on wheat prices. Our data over the past cover ten up-legs of the cycle and from these we can easily figure the odds on the data matching the coming ideal peak.

Eight times out of the ten the actual price at the time of the ideal high has been above the price at the time of the previous ideal low. It is important to remember that two times the cycle did not work. But, the odds are 4 to 1 that it *will* work and that at October 1964 the price of wheat will be above last February's price of $2.242.

The average increase from the low to the following high in the actual figures has been 37% (including the two negative figures). If just the eight cases that worked are considered the average increase was 51%. The odds are 3 to 2 that the increase to October 1964 will be between 8% and 77%. G. S.

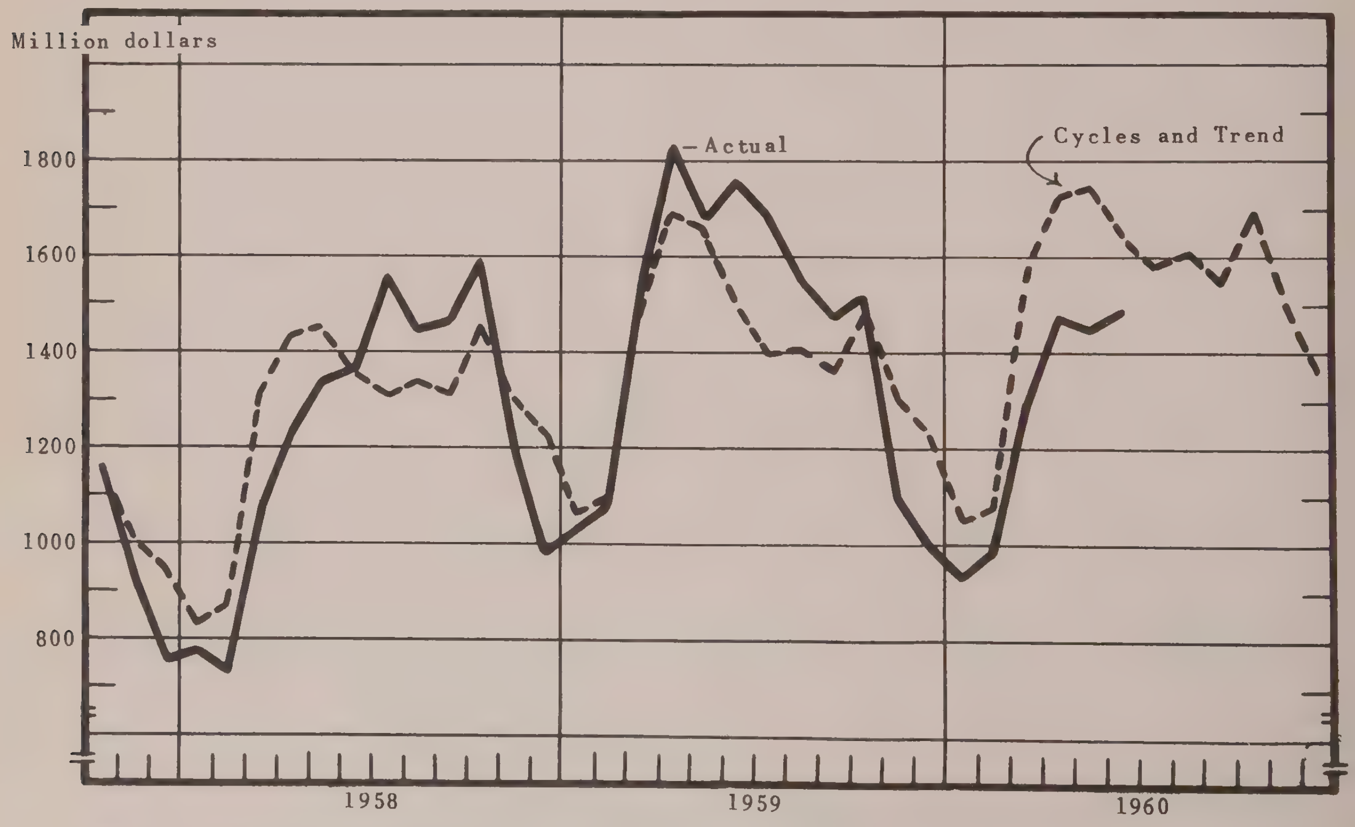
* * *

RESIDENTIAL BUILDING CONTRACTS SAG

The residential construction contracts series is one of the leading economic indicators. It usually turns up and down ahead of business in general.

At the present time, the figures are running lower than they should. See the chart below. The theoretical 32.3-month cycle is now on the way up to a high due ideally at December of this year. Despite the upward force of this usually dependable cycle, contracts have been running consistently below those of a year ago. This fact is not encouraging.

G. S.



TWO CYCLES AND TREND COMBINED COMPARED TO ACTUAL CONTRACTS

SMITH'S DECENNIAL PATTERN STILL LOOKS GOOD

The monthly average of the daily close of the Dow-Jones Industrial Stock Price Average continues to follow in a general way the decade pattern postulated by Edgar Lawrence Smith. Smith's decennial pattern was discussed in the February 1960 issue of *Cycles*. The chart below compares it to the Dow-Jones Industrials.

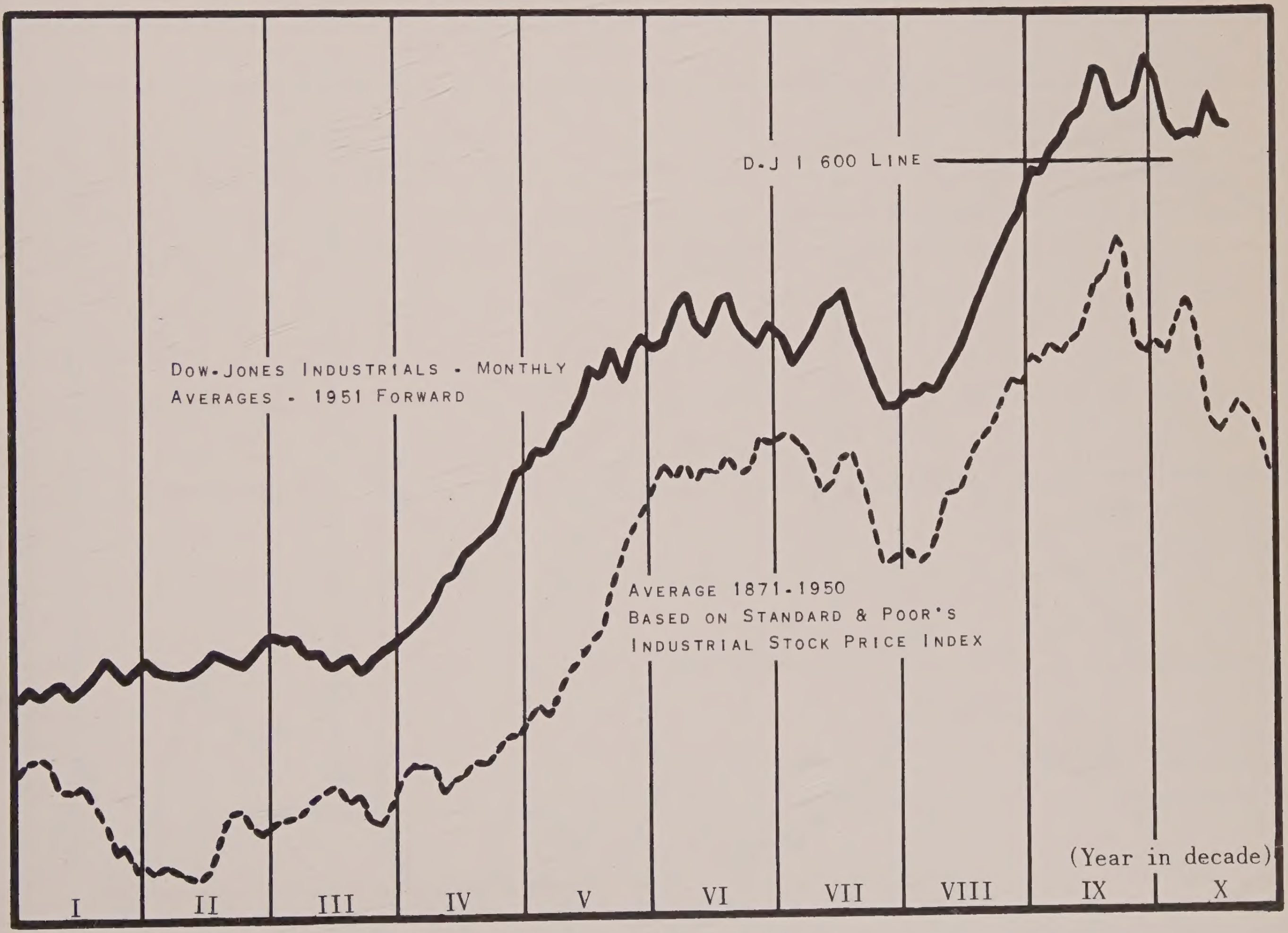
The year I in the average pattern includes all the years ending with one, starting with 1871, and ending with 1941. The January plot for the year I is the average of all the January values—January 1871, January 1881, etc.

The Dow-Jones plots are single monthly values from January 1951 through August 1960.

The point is the manner in which the Dow-Jones figures have followed the pattern of the past. In the pattern the ninth year is the peak year. It is followed by lower values in the tenth year. But the decade pattern shows an "average", or typical figure, and the actual values of the individual months included in that average have of course been both above and below the average.

Nevertheless, the correspondence between the two lines has been good except during the second year. Operating with the decade pattern as a guide would have been profitable during the past ten years.

In the February article we said that the implications for 1960 were interesting. So far this year the drop has not been as deep as in the past. The next four months would appear to be the most important in the entire decade! G. S.



DECENNIAL PATTERN IN STOCK PRICES (AFTER SMITH)

The Geisinger Indicator

THE CURRENT FORECAST

This month's message is: wait!

Industrial Production held steady during the month of July. The Federal Reserve Board's Index for July, after adjustment for seasonal variation, was 166, the same value as for June.

The Geisinger Indicator, based on figures available today, was -2.00 for the month of April. This figure applies to December when advanced eight months, and is up slightly from the -2.20 figure which applied to November.

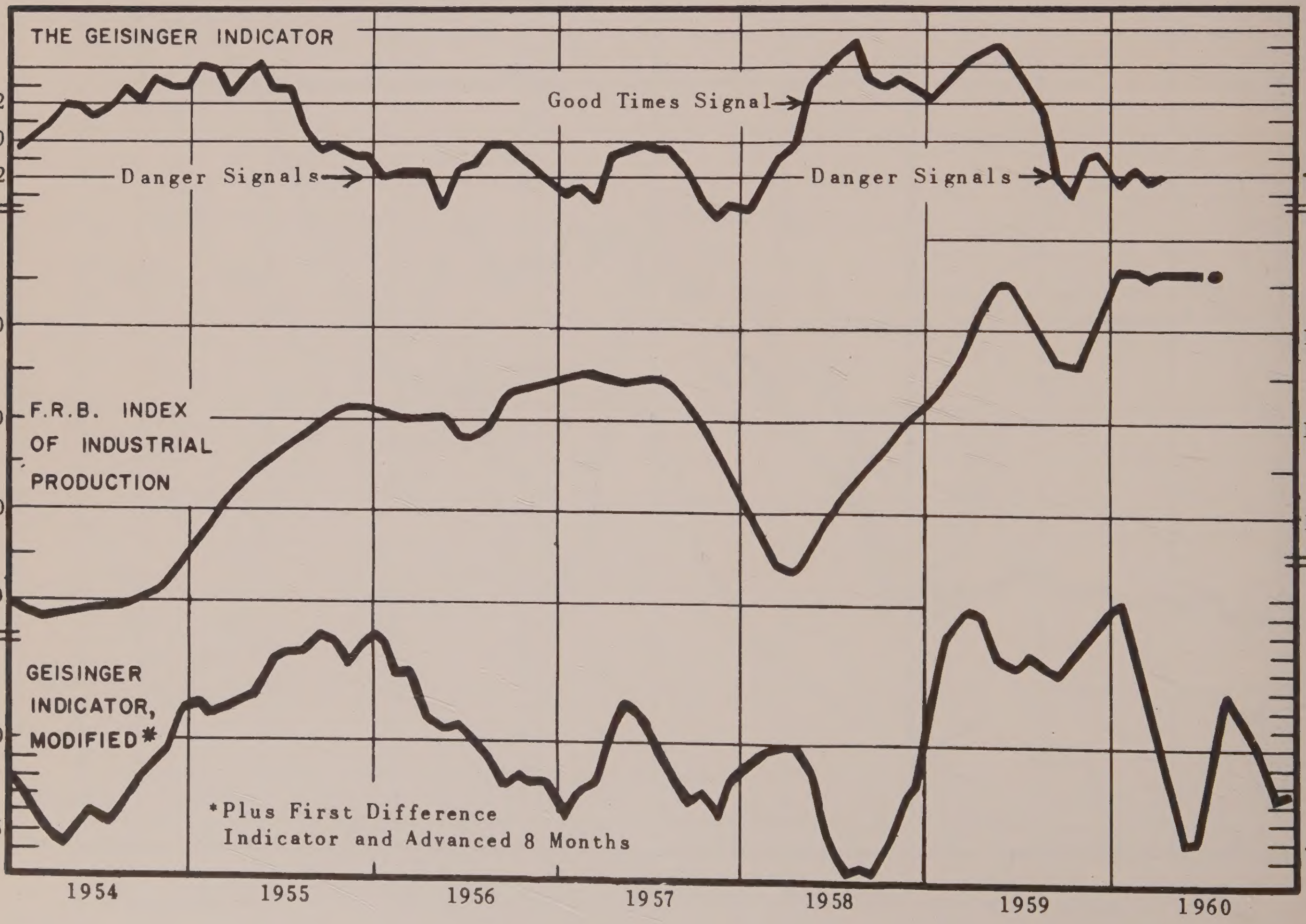
The First Difference Indicator moved sideways. It was 0.17 at June compared to 0.16 for May. This sideways move reflects the flat top that has developed in the line of Industrial Production.

The Modified Geisinger Indicator, which is the sum of the Geisinger Indicator and the First Difference Indicator, was -2.33 for April (December when advanced).

Thus, very little developed during the month of July to brighten the economic outlook for the end of the year. The Indicators did not go any lower, but the move was sideways rather than upward.

When the Geisinger cuts +2.00 going up, we can revise our recent note of warning.

August 24, 1960 E. R. Dewey

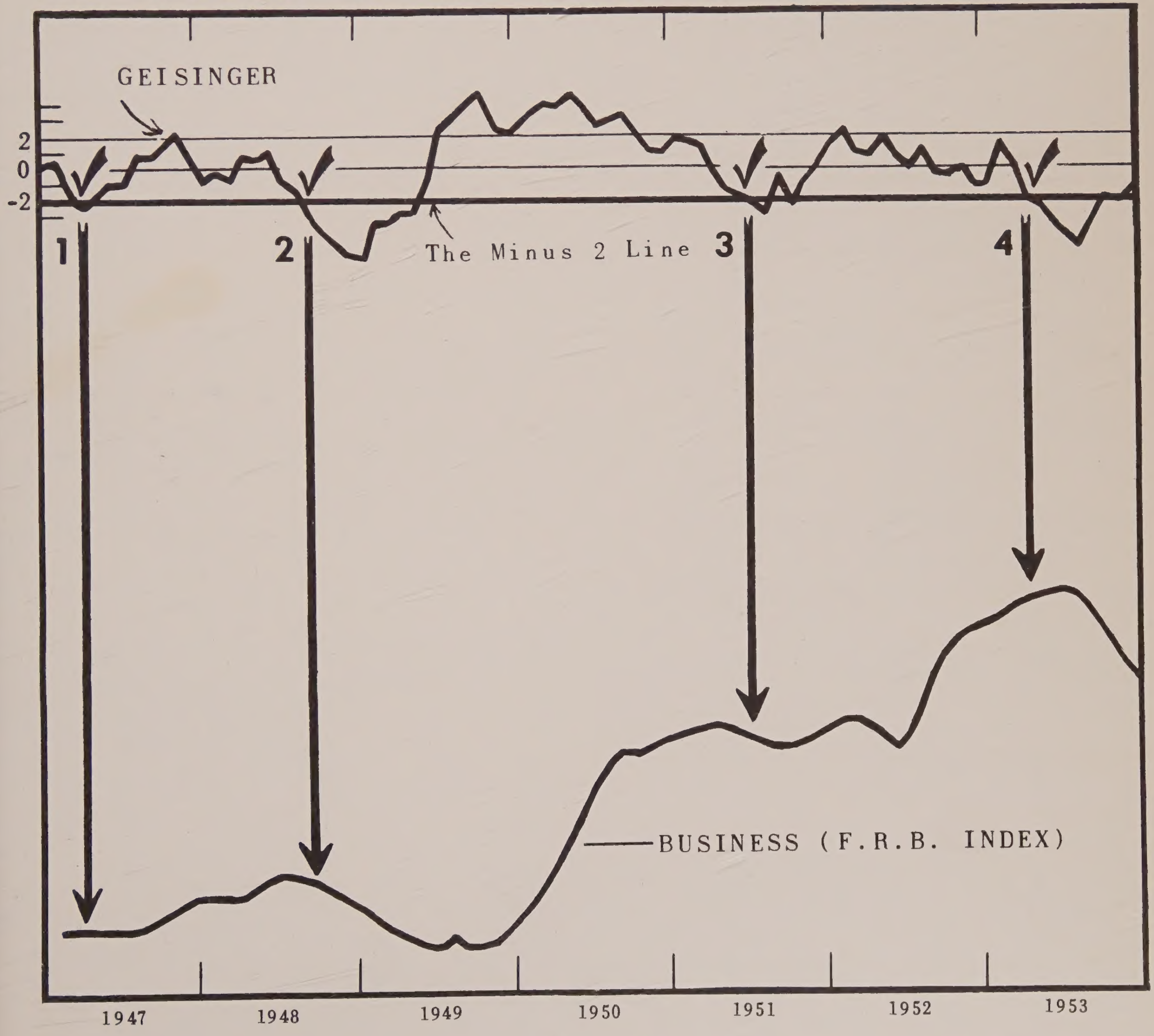


THE RECENT FIGURES

Month	F.R.B. Index	Geisinger Indicator	First Difference Indicator	Modified Geisinger Indicator	Advanced 8 Months
Oct-1959	154	-3.20	-1.83	-5.03	1960-Jun
Nov	155	-1.00	1.00	0.00	Jul
Dec	165	-0.80	3.67	2.87	Aug
Jan-1960	168	-2.80	4.16	1.36	Sep
Feb	166	-1.60	2.00	0.40	Oct
Mar	166	-2.20	-0.33	-2.53	Nov
Apr	165	-2.00	-0.33	-2.33	Dec
May	167	*	0.16	*	1961-Jan
Jun	166	*	0.17p	*	Feb
Jul	166p	*	*	*	Mar

p - preliminary; * - not yet available

THE RECORD OF THE GEISINGER INDICATOR



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